Applicant's Name_____

SYSTEMS AND EQUIPMENT (MECHANICAL EQUIPMENT)

Reference FAA Order 8110.37, Appendix 2, Chart C1

DER APPLICATION EVALUATION TECHNICAL CRITERIA

Delegated Functions & Authorized Areas

- Applicant indicates requested area(s) of delegation and attaches supporting data to establish technical expertise and experience.
- Advisor (**Adv**) evaluates requested area(s), recommends area(s) to Evaluation Panel (**EP**). (Y=YES; N=NO) and provides rationale.
- Evaluation Panel evaluates area(s) recommended by Advisor, marks **EP** column. (Y=YES; N=NO) and provides rationale.

DER APPLICANT USE ONLY		*FAA USE ONLY*	
Requested Areas	**DETAIL DESIGN & INSTALLATION**	**Adv**	**EP**
	1A Air Conditioning		
	1B Hydraulic		
	1C Ice Protection		
	1D Rain Protection		
	1E Oxygen		
	1F Pneumatics		
	1G Wheels, Tires, Brakes		
	1H Interior Arrangements		
	1I Interior Materials		
	1J Pressurization		
	1K Fire Protection		
	1L Water System, Potable & Waste		
	1M Evacuation Systems		
	1N Special (Specify)		
Requested Areas	**EQUIPMENT QUALIFICATION TESTS**	**Adv**	**EP**
	2A Air Conditioning		
	2B Hydraulic		
	2C Ice Protection		
	2D Rain Protection		
	2E Oxygen		
	2F Pneumatics		
	2G Wheels, Tires, Brakes		
	2J Pressurization		
	2K Fire Protection		
	2L Water System, Potable & Waste		
	2M Evacuation Systems		
	2N Special (Specify)		
Requested Areas	**SOFTWARE**	**Adv**	**EP**
	3A Air Conditioning		
	3B Hydraulic		
	3C Ice Protection		
	3D Rain Protection		
	3E Oxygen		
	3F Pneumatics		
	3G Wheels, Tires, Brakes		
	3J Pressurization		
	3K Fire Protection		
	3L Water System, Potable & Waste		
	3N Special (Specify)		

Additional requirements for a DER with a delegation of Software Approval:

Circle One

Yes No (a) Comprehensive familiarity with, and understanding of, RTCA Document DO-178 (applicable revision), Software Considerations in Airborne Systems and Equipment Certification.

Yes No (b) Familiarity with the systems safety assessment process, specifically, those portions which establish the software criticality levels.

Yes No (c) A demonstrated knowledge of the rationale for, and the significance of, each stage in the software development process, as well as its supporting standards, procedures, and documentation. The DER should be able to identify the critical aspects and contents of each of the documents mentioned in DO-178.

Yes No (d) Experience gained from participation in some technically responsible capacity over a complete software development program life cycle. This qualification may be satisfied by an aggregate over several different software development programs.

Yes No (e) Experience interacting with all phases of software development and testing processes addressed by DO-178, including utilization of the associated configuration and quality control procedures. This experience should include significant responsible involvement in several of those phases. When assessing an applicant's capabilities for making a knowledgeable finding of compliance, experience obtained in the requirements development or testing phases may, for example, be weighted more heavily than that obtained in the detail design or coding phases.

Yes No (f) Fluency in at least one high-level and one assembly-level programming language and familiarity with typical support software used in a software development process. Familiarity with typical software tools available to facilitate the development, documentation, and consistency-checking processes is highly desirable.

Yes No (g) Demonstrated knowledge of the sources of software anomalies, the relative merits of the types of testing procedures which are available to protect against them, and the characteristics of a thorough test program.

Yes No (h) Familiarity with the aspects of computing peculiar to real-time avionics systems, such as the use of interrupts, multi-tasking, software reentrancy, etc. This should include an appreciation of the types of analysis and testing necessary to ensure the integrity of these mechanisms.

Yes No (i) An understanding of the techniques which may be employed to reduce software criticality levels, such as system architecture, multi-version programming, and partitioning. This should include the ability to assess the adequacy of a proposed technique relative to the integrity credit desired.

Yes No (j) Knowledge of hardware characteristics such as input/output schemes, memory organization and multi-port access, communication-bus protocols, and processor architecture, all of which have an impact on the software interface and the potential for the creation of anomalies.

Applicant's Name_____

SYSTEMS AND EQUIPMENT (MECHANICAL EQUIPMENT)

Reference FAA Order 8110.37, Appendix 2, Chart C1

DER APPLICANT USE ONLY		*FAA USE ONLY*	
Requested Areas	**SAFETY ANALYSIS**	**Adv**	**EP**
	4A Air Conditioning		
	4B Hydraulic		
	4C Ice Protection		
	4D Rain Protection		
	4E Oxygen		
	4F Pneumatics		
	4G Wheels, Tires, Brakes		
	4J Pressurization		
	4K Fire Protection		
	4L Water System, Potable & Waste		
	4M Evacuation Systems		
	4N Special (Specify)		
Requested Areas	**FLAMMABILITY**	**Adv**	**EP**
	5I Interior Materials		
	5K Fire Protection		
	5N Special (Specify)		
Requested Areas	**LIGHTNING / HIRF PROTECTION**	**Adv**	**EP**
	6A Air Conditioning		
	6B Hydraulic		
	6C Ice Protection		
	6D Rain Protection		
	6E Oxygen		
	6F Pneumatics		
	6I Interior Materials		
	6J Pressurization		
	6K Fire Protection		
	6L Water System, Potable & Waste		
	6N Special (Specify)		
Requested Areas	**SERVICE DOCUMENTS**	**Adv**	**EP**
	7A Air Conditioning		
	7B Hydraulic		
	7C Ice Protection		
	7D Rain Protection		
	7E Oxygen		
	7F Pneumatics		
	7G Wheels, Tires, Brakes		
	7H Interior Arrangements		
	7I Interior Materials		
	7J Pressurization		
	7K Fire Protection		
	7L Water System, Potable & Waste		
	7M Evacuation Systems		
	7N Special (Specify)		